

USDOE, Kansas City Plant
MO-0004863

May 14, 2004

United States Department of Energy (USDOE)
P.O. Box 410202
Kansas City, MO 64141-0202

Dear Permittee:

State Operating Permit No. MO0004863 originally issued on November 5, 1999, is hereby modified as per the enclosed. This modification is to eliminate Total Residual Chlorine from all outfalls. The attached permit is for your official record.

Please read your permit and attached Standard Conditions. They contain important information on monitoring requirements, effluent limitations, sampling frequencies and reporting requirements.

This modification does not affect any monitoring or analysis of the effluent that may be necessary to comply with other requirements of your permit or other state regulations and does not in any way relieve you of your obligations to achieve the final effluent limitations as provided in the permit.

This permit is both your federal discharge permit and your new state operating permit and replaces all previous state operating permits for this facility. In all future correspondence regarding this facility, please refer to your state operating permit number and facility name as shown on page one of the permit.

If you have any questions concerning this permit, please do not hesitate to call this office at (573) 751-1300 or our Kansas City Regional Office, 500 NE Colbern Road, Lee's Summit, MO 64086-4710.

Sincerely,

WATER PROTECTION PROGRAM

Peter Goode, P.E.
Chief, NPDES Permits and Engineering Section

PG:tsl

Enclosure

c: DNR Kansas City Regional Office

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.: MO-0004863

Owner: United States Department of Energy (USDOE)
Address: P.O. Box 410202, Kansas City, MO 64141-0202

Continuing Authority: United States Department of Energy (USDOE)
Address: P.O. Box 410202, Kansas City, MO 64141-6159

Facility Name: USDOE, Kansas City Plant
Address: 2000 East 95th Street, Kansas City, MO 64131-3095

Legal Description: See page 2

Receiving Stream: See page 2

First Classified Stream and ID: See page 2

USGS Basin & Sub-watershed No.: See page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

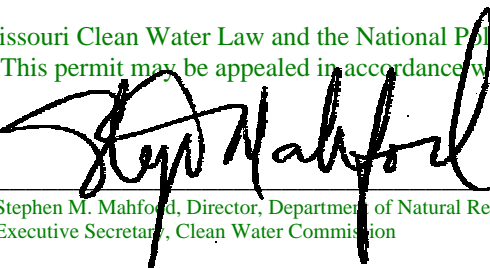
FACILITY DESCRIPTION

See page 2

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

November 5, 1999 May 14, 2004
Effective Date Revised

November 2, 2004
Expiration Date
MO 780-0041 (10-93)


Stephen M. Mahford, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

Jim Hull, Director of Staff, Clean Water Commission

FACILITY DESCRIPTION (continued)

Outfall #001 - Federal Facility/Industry - SIC #9711

Stormwater runoff. Fire protection test water. Uncontaminated stormwater collected in various sumps, secondary containment structures, and excavated pits. Sample collection point at flap-gate structure located 135 feet northeast of the flood protection levee sluice-gate.

Hydrostatic testing of new piping and tanks using city water.

Condensate from building heating and cooling units.

Total design flow is 1.925 MGD.

Average actual flow is 0.52 MGD.

Legal Description: SE ¼, SE ¼, Sec. 21, T48N, R33W, Jackson County

Receiving Stream: Blue River/Indian Creek (P)

First Classified Stream and ID: Blue River 2 (P)(00419)

USGS Basin & Sub-watershed No.: (10300101-010030)

Outfall #002 - Federal Facility/Industry - SIC #9711

Stormwater runoff. Fire protection test water.

Uncontaminated stormwater collected in various sumps, secondary containment structures, and excavated pits.

Hydrostatic testing of new piping and tanks using city water.

Condensate from building heating and cooling units.

Total design flow is 1.53 MGD.

Average actual flow is 0.21 MGD.

Legal Description: NW ¼, SE ¼, Sec. 28, T48N, R33W, Jackson County

Receiving Stream: Blue River/Indian Creek (P)

First Classified Stream and ID: Indian Creek (C)(00420)

USGS Basin & Sub-watershed No.: (10300101-010050)

Outfall #003 - Federal Facility/Industry - SIC #9711

Stormwater runoff. Fire protection test water. Uncontaminated stormwater collected in various sumps, secondary containment structures, and excavated pits.

Hydrostatic testing of new piping and tanks using city water.

Condensate from building heating and cooling units.

Total design flow is 0.80 MGD.

Average actual flow is 0.11 MGD.

Legal Description: NW ¼, SW ¼, Sec. 28, T48N, R33W, Jackson County

Receiving Stream: Indian Creek (C)

First Classified Stream and ID: Indian Creek (C)(00420)

USGS Basin & Sub-watershed No.: (10300101-010050)

Outfall #004 - Federal Facility/Industry - SIC #9711

Stormwater runoff. Fire protection test water. Uncontaminated stormwater collected in various sumps, secondary containment structures, and excavated pits.

Hydrostatic testing of new piping and tanks using city water.

Condensate from building heating and cooling units.

Total design flow is 1.125 MGD.

Average actual flow is 0.18 MGD.

Legal Description: NW ¼, SW ¼, Sec. 28, T48N, R33W, Jackson County

Receiving Stream: Indian Creek (C)

First Classified Stream and ID: Indian Creek (C)(00420)

USGS Basin & Sub-watershed No.: (10300101-010050)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 3 of 9	
					PERMIT NUMBER MO-0004863	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until November 5, 2002. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001-#004 (Note 1)</u> Polychlorinated Biphenyl Compounds	µg/L	Note 3		Note 3	once/week	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2004</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 4 of 9	
					PERMIT NUMBER MO-0004863	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until November 2, 2004. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001-#004 (Note 1)</u>						
Flow	MGD	*		*	once/week	24 hr. estimate
Rainfall	inches	*		*	once/day	measured
Temperature	°F	**		**	once/month	grab
pH - Units (Note 4)	SU	Note 2		Note 2	once/week	grab
Settleable Solids	mL/L	1.5		1.0	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab
Mercury, Total Recoverable	µg/L	2		2	once/quarter*****	grab
Aluminum, Total Recoverable	µg/L	*		*	once/quarter*****	grab
Aluminum, Dissolved	µg/L	*		*	once/quarter*****	grab
Chromium, Total Recoverable	µg/L	*		*	once/quarter*****	grab
Trichloroethylene	µg/L	*		*	once/quarter*****	grab
1,2-Dichloroethylene	µg/L	*		*	once/quarter*****	grab
Vinyl Chloride	µg/L	*		*	once/quarter*****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2004</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 5 of 9	
					PERMIT NUMBER MO-0004863	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective November 6, 2002 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001-#004 (Note 1)</u> Polychlorinated Biphenyl Compounds	µg/L	****		****	once/week	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2004</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 6 of 9	
					PERMIT NUMBER MO-0004863	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective November 3, 2004 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001-#004 (Note 1)</u>						
Flow	MGD	*		*	once/week	24 hr. estimate
Rainfall	inches	*		*	once/day	measured
Temperature	°F	**		**	once/month	grab
pH - Units	SU	***		***	once/week	grab
Settleable Solids	mL/L	1.5		1.0	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab
Mercury, Total Recoverable	µg/L	2		2	once/quarter*****	grab
Aluminum, Total Recoverable	µg/L	*		*	once/quarter*****	grab
Aluminum, Dissolved	µg/L	*		*	once/quarter*****	grab
Chromium, Total Recoverable	µg/L	*		*	once/quarter*****	grab
Trichloroethylene	µg/L	*		*	once/quarter*****	grab
1,2-Dichloroethylene	µg/L	*		*	once/quarter*****	grab
Vinyl Chloride	µg/L	*		*	once/quarter*****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2004</u> .						
THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** Effluent shall not elevate or depress the temperature of the receiving stream beyond the mixing zone more than five (5)°F. The stream temperature beyond the mixing zone shall not exceed ninety (90)°F due to the effluent.
- *** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.
- **** There shall be no release of polychlorinated biphenyl compounds (PCBs) to waters of the state at or above the level of quantification currently defined as 0.5 µg/L or 0.5 ppb.
- ***** Sample once per quarter in the months of March, June, September, and December.

A. EFFLUENT LIMITATIONS (continued)

Note 1 - The effluent monitoring locations for Outfalls #001 - #004 shall be those proposed in the application for discharge permit submitted by the USDOE on January 29, 1998, and amended on May 14, 1998, (i.e., at the sluice gates for Outfalls #001 - 004).

Note 2 - pH is measured in pH units and is not to be averaged. The pH is limited to the range of no less than 6.0 to no greater than the pH of the incoming water supply.

Note 3 - There shall be no release of polychlorinated biphenyl compounds (PCBs) to waters of the state at or above the level of 1 µg/L or 1 ppb.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.

3. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 ug/L);
 - (2) Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

4. Report as no-discharge when a discharge does not occur during the report period.

C. SPECIAL CONDITIONS (continued)

5. General Criteria. The following water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (a) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (b) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (c) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (d) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (e) There shall be no significant human health hazard from incidental contact with the water;
 - (f) There shall be no acute toxicity to livestock or wildlife watering;
 - (g) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (h) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
6. Permittee shall be responsible for establishing procedures for Missouri Department of Natural Resources (MDNR) staff to inspect all working areas as well as areas where records or monitoring equipment are kept. MDNR staff may at any time sample any wastewater at any point in the collection system. Any inspection or sampling performed in security classified areas will be performed by MDNR staff member with active DOE security clearance.
7. The results of all analysis of storm sewer outfall effluent monitoring as well as the results of all in stream monitoring of Indian Creek and Blue River shall be submitted to the MDNR annually as a summary of the analytical results.
8. This permit allows only for discharges from the sources described in the "Facility Description." It does not allow for discharges of industrial process wastewater, sanitary wastewater, groundwater from monitoring wells, or water used for hydrostatic testing of previously used pipelines and tanks other than those used exclusively for uncontaminated city water.
9. Secondary containment sumps and excavated pits.
 - (a) Prior to discharge, storm water contained in sumps and pits shall be examined by facility staff for visual sheen, discoloration, turbidity, or other contaminants. If evidence of contamination exists, the stormwater shall be treated prior to discharge or disposed of in the sanitary sewer system. During daily operation, discharge valves shall remain closed and sump pumps remain off until an inspection is completed. A log of each inspection and findings shall be kept on site for a period of at least five years and made available to MDNR staff upon request.
 - (b) At least once per month, each secondary containment structure shall be visually inspected by facility staff to identify problems that may cause contamination of storm water in the structure, discharge of contaminants, or violation of this permit. Items to inspect include but are not limited to storage tank and drum integrity, foundation integrity, piping, valves, and other appurtenances. A log of such inspections and findings shall be kept on site for a period of at least five years and made available to MDNR staff upon request.

C. SPECIAL CONDITIONS (continued)

9. Secondary containment sumps and excavated pits (continued)

- (c) In the event of a spill, leak, or release of contaminants within a secondary containment structure or pit, any stormwater which accumulates in the structure or pit from the time the spill, leak, or release is detected until all evidence of the spill, leak, or release is removed, shall not be discharged but be disposed of in the sanitary sewer system or another permitted manner. Discharge to the sanitary sewer shall only be made in accordance with the city of Kansas City's sewer use ordinance or with their approval. A thorough inspection of the structure, including chemical analyses of stormwater, should be conducted after removal of any spilled material to insure no contamination exists within the structure.
- (d) Stormwater contained in excavated pits located in areas of known soil contamination of PCBs, heavy metals, and/or organic compounds, shall be analyzed prior to discharge. If analytical results indicate levels above the permitted final effluent limits or notification levels, the stormwater in question shall not be discharged.

10. Best Management Practices

- (a) The permittee shall maintain a copy of the approved Best Management Practices (BMP) plan at the facility.
- (b) The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of hazardous or toxic pollutants directly to waters of the State.
- (c) If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of significant amounts of toxic or hazardous pollutants to waters of the State, the permit and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements.

Date of Fact Sheet: July 30, 1999

Date of Public Notice: March 26, 2004

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
FACT SHEET

This Fact Sheet explains the applicable regulations, rationale for development of this permit and the public participation process.

NPDES PERMIT NUMBER: MO-0004863

FACILITY NAME: USDOE, Kansas City Plant

OWNER NAME: United States Department of Energy

LOCATION: Parts of Sec. 21 & 28 T48N R33W County: Jackson

RECEIVING STREAM: Indian Creek (10300101-32-00)(C) & Blue River (10300101-31-00)(P)

FACILITY CONTACT PERSON: Karol Turner, Environment, Safety, & Health Technical Manager

TELEPHONE: (816) 997-3354

FACILITY DESCRIPTION AND RATIONALE

The Federal Water Pollution Control Act established the National Pollutants Discharge Elimination System (NPDES) program in order to regulate discharges of pollutants from point sources into waters of the United States. All such discharges are unlawful without a permit, and discharges not in compliance with all permit terms and conditions are unlawful. The NPDES program in Missouri is administered by the Missouri Department of Natural Resources.

The United States Department of Energy has applied for renewal of the Missouri State Operating Permit (MSOP) for stormwater and non-process wastewater discharges from their Kansas City Plant. The facility produces and procures non-nuclear parts for nuclear weapons with a primary Standard Industrial Classification (SIC) code of 9711. The facility is operated under contract by Allied Signal Federal Manufacturing and Technologies.

The beneficial uses for the receiving streams are livestock and wildlife watering, protection of warm water aquatic life and human health, boating, industrial, and whole body contact recreation.

Rationale for effluent limits are as follows: The permit writer used "Best Professional Judgement" to consider pollutants believed present and established limits based on good housekeeping and/or physical treatment of wastewater. Monitoring is being required on other parameters known or suspected to be present in order to obtain additional information to determine if there is need to limit those pollutants in any reissued permits. Best Management Practices are also required to complement the limitations and monitoring in order to insure that pollutant sources are as isolated from water as is feasible.

The proposed limit for temperature is taken from 10 CSR 20-7.031 (4)(D).

The proposed final limit range for pH is taken from 10 CSR 20-7.031 (4)(E).

The proposed final limit for total residual chlorine is taken from 10 CSR 20-7.031 (4)(A) (Table A - Criteria for Designated Uses).

FACT SHEET
USDOE, Kansas City Plant
MO-0004863

Interim effluent limitations - Polychlorinated biphenyl compounds (PCBs) are not allowed to be discharged to waters of the state at or above the quantification level of 1.0 ug/L.

Final effluent limitations - PCBs are not allowed to be discharged to waters of the state at or above the level of quantification currently defined as 0.5 ug/L. The facility has well documented areas of PCB soil contamination.

Effluent sampling conducted by the facility over the last five years indicates sporadic discharges of mercury. The proposed limit for mercury was calculated from 10 CSR 20-7.031(4) as follows:

Upstream low flow = 22 cfs * 25% (allowed mixing zone) = 5.5 cfs
DOE maximum dry flow 1.5 cfs; 5.5 cfs/1.5 cfs = 3.6 (4 times dilution allowed)
0.5 ug/L (chronic water quality standard) * 4 = 2 µg/L